INNOVATIVE ELECTRONIC PASTURE COMMITTEE SOFTWARE

Elvira MARATOVA, Kyrgyzstan, KYRGYZ JAYITY National pasture users' association of Kyrgyzstan (elviramaratovaa@gmail.com)

Paper prepared for presentation at the
"2019 WORLD BANK CONFERENCE ON LAND AND POVERTY"
CATALYZING INNOVATION
The World Bank - Washington DC, March 25-29, 2019

Abstract

Kyrgyzstan today: 15 pasture users unions (PUU) use an innovative approach to manage pastures. The information system "Electronic Pasture Committee" (EPC) allows to keep automated records of the pasture committee's work through the formation of a database of pasture users, livestock, data on pasture plots (capacity, optimal load, seasonality, etc.), calculating the pasture use fees, control of payments made, distribution of pasture plots, vaccination. Before EPC the whole process was carried out manually, not always correctly and regularly, there was no single approach and a unique tool for making operational decisions. Planning, management and use of state pastures in Kyrgyzstan has been legally transferred to local communities and the EPC has already proved its effectiveness, resulting in improved pasture conditions, reduction of pasture load, and overall improvement of pasture infrastructure. Currently, "Kyrgyz Jayity" is working on improving EPC in order to form a consolidated database of all 454 district PUUs.

Key Words: *pasture, electronic, committee, innovation, Kyrgyzstan*

Introduction

More than 93% of Kyrgyzstan's territory is occupied by mountain ranges of the two greatest mountain systems - Tine Shan and Pamir-Alai, which are covered by large tracts of natural pastures with total area more than 9 million hectares and occupies more than 85% of total agricultural land area. The average altitude above sea level is 2750 m, about 1/3 of the territory is at an altitude of 400 to 3000 m. The highest point is Victory Peak (7439 m).

The earth, its bowels, airspace, waters, forests are the exclusive property of the Kyrgyz Republic, are used to preserve a single ecological system as the basis for the life and work of Kyrgyzstan's people and are under special protection of the state. Land can also be in private, municipal and other forms of ownership, <u>except for pastures</u>, which cannot be privately owned.

Prerequisites for pasture reform: strengthening of pasture degradation processes due to unsystematic and uncontrolled use, decline of pasture infrastructure, 3-level ineffective pasture management system, lack of legislation, using the lacks of the pasture rent institute, wealthy pastoralists themselves began to seize huge areas or sublet them.
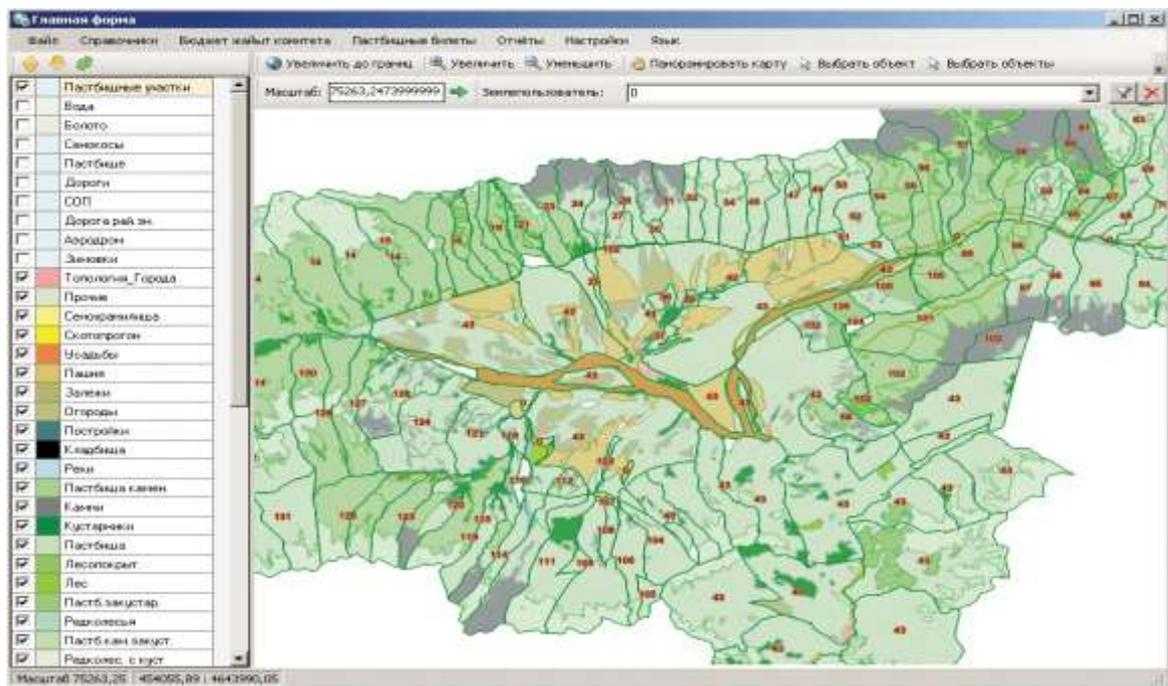
Pasture condition before reform: 1.358 thousand hectares (or 15% from total 9 million hectares) in the stage of desertification and in the stage of initial degradation are 1.947 thousand hectares (21%), other - 64% were not degraded.

Pasture management system before and after adoption of the Law "On pastures": before - Summer pastures were under the Regional state administration, Spring/fall and Winter pastures under the Rural District; after reforms – all pasture are under the local community's administration.

The main goals and objectives of the Law "On pastures" of the Kyrgyz Republic: transfer of responsibility and control over the use of pastures in state ownership to local self-government bodies, prohibition of leasing and sublease of pastures, establishment and definition of pasture boundaries, the creation by local communities of pasture user associations, setting fees for the use of pastures for livestock, provision and use of pastures and pasture-based pasture resources, management and use of pastures in accordance with management plans and pasture use developed by the pasture committee and approved by the local government, provision of pastures to foreign users, use of pastures for other purposes (except grazing).

"Electronic pasture committee" software is a computer program that allows to manage pastures and contains an electronic map of the territory and allows you to keep a record of pasture areas, the number of pasture users and livestock, accounting for vaccination, payment for livestock and issued pasture tickets. The system includes a plan for pasturing cattle, which includes terms, routes, pasture areas with yield and capacity data, which are updated annually by the committee.

It's an innovative approach in pasture management, based on the community. The system includes functions for counting livestock numbers, controlling vaccination, and also allows for the search for pasture tickets, the route for the transfer of livestock, the number of grazed livestock, grazing areas, the calculation of the amount of payment, accounting of payments, reporting.

Livestock subsystem: livestock keeping by species and owners, record of vaccination of livestock, plan and execution of vaccinations, registration of livestock owners, issuance of certificates of livestock, reporting.

Results:

- Introduction of the system allowed to start rationally and steadily to manage pastures, taking into account ecologically safe load on pastures, and showed its effectiveness, this mechanism allows you to quickly manage pastures and monitor the condition of pastures, monitor the processes of land degradation.
- System includes functions for counting livestock numbers, controlling vaccination, and also allows for the search for pasture tickets, the route for the transfer of livestock, the number of grazed livestock, the grazing area, the calculation of the amount of payment, accounting for payments, reporting.
- Electronic pasture committee will promote the formation of an equitable and socially acceptable pasture distribution system, resolve conflicts of interest, ensure effective public control (reporting, transparency), and thereby improve the pasture management system at the local level.
- all the leaders and members of the pilot pasture committees noted the importance of the electronic module, as the automated Information System made it very easy for them to work with pasture users.
- in particular, they noted that they have improved the reporting procedures, it helps to monitor the vaccination process, take into account the actual livestock population, monitor pasture degradation and monitor the payment of pasture committees.
- this gives confidence that the results obtained during its implementation will be sustainable and will continue in further work to improve pasture management practices in pilot pasture committees, and will undoubtedly have a positive impact on the state of the environment.

Conclusions and recommendations:

We conclude that community based co-management of pasture land, with broader participation of herders, local and central governments, as far as national and local level data base for pasture management experienced in Kyrgyzstan. New innovative approaches have sustainable results in the pilot areas and need to be used broader and implemented in all the pasture users' unions of the country. Improved rangeland management electronic system is a way to deal with pasture degradation and livelihood improvement of herder's in Central Asia. However in the case of transitional economies of Kyrgyzstan and Central Asia at all, with more secured tenure rights and clear pasture management plans, legal support by the government, and equal participation of all stakeholders, particularly herder's and local communities.

Website links:

www.jayit.kg